

Customer No. 00909

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:	)	Docket No.: 032028-0311061
Jay PETERSON <i>et al.</i>	)	Confirmation No.: 8439
Serial No.: 09/708,713	)	Examiner: Albert J. Gagliardi
Filed: November 9, 2000	)	Group Art Unit: 2878

For: UNMANNED INTEGRATED OPTICAL REMOTE EMISSIONS SENSOR (RES) FOR MOTOR VEHICLES

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicants hereby make of record in the above-identified application the documents listed on the attached Form PTO-1449.

Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated. Where the publication date of a listed document does not provide a month of publication, the year of publication of the listed document is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the month of publication is not an issue.


Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This Supplemental Information Disclosure Statement is being filed before the mailing date of a first Office Action after the filing of a request for continued examination under 37 C.F.R. 1.114. No certification or fee is required. 37 C.F.R. 1.97(b).

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449.

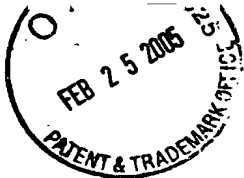
Respectfully submitted,

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Dated: February 25, 2005



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**U.S. PATENT DOCUMENTS**

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**FOREIGN PATENT DOCUMENTS**

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							YES	NO

**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

	1A	Technical Proposal – "Vehicle Inspection Instrumentation"; submitted to California Air Resources Board; September 1, 1971, Lockheed Palo Alto Research Laboratory, Lockheed Missiles & Space Company – A Group Division of Lockheed Aircraft Corporation, Palo Alto, California
	1B	HOSHIZAKI, <i>et al.</i> , Final Report – "Vehicle Inspection Instrumentation"; submitted to California Air Resources Board; June 1973, Lockheed Palo Alto Research Laboratory, Lockheed Missiles & Space Company – A Group Division of Lockheed Aircraft Corporation, Palo Alto, California
	1C	<a href="http://www.epa.gov/otaq/15-remot.htm">http://www.epa.gov/otaq/15-remot.htm</a> ; "Remote Sensing: A Supplemental Tool for Vehicle Emission Control," August 1993, EPA 400-F-92-017, Fact Sheet OMS-15; 4 pages
	1D	LUCIEN W. CHANEY, "The Remote Measurement of Traffic Generated Carbon Monoxide, APCA Note-Book," Journal of the Air Pollution Association; Copyright 1983; 3 pages
	1E	PAUL STOCKWELL, "Tunable Diode Laser Systems Break New Ground in Water Vapour Analysis"; IMA Ltd., Unit Newall Hall Park, Otley, West Yorkshire, United Kingdom; [undated]; 8 pages
	1F	MARK G. ALLEN, "Diode Laser Absorption Sensors for Gas Dynamic and Combustion Flows," Copyright 1998 Measurement Science and Technology 9; 61 pages
	1G	KERRY L. SWAYNE, "Infrared Remote Sensing of On-Road Motor Vehicle Emissions in Washington State," March, 1999, Air Quality Program, Washington State Department of Ecology, Washington; Publication #99-204; 20 pages
	1H	ROBERT D. STEPHENS, "Remote Sensing Data and a Potential Model of Vehicle Exhaust Emissions," November 1994, Vol. 44, Journal of Air & Waste Management Association, pp. 1284-1292
	1I	"An Analysis of On-Road Remote Sensing as a Tool for Automobile Emissions Control," Final Report Prepared by University of Denver Chemistry Department, Colorado, March 1990; 174 pages; prepared for Illinois Department of Energy and Natural Resources
	1J	ROBERT D. STEPHENS, <i>et al.</i> , "Remote Sensing Measurements of In-Use Vehicle Carbon Monoxide and Hydrocarbon Exhaust Emissions," Environmental Science Department, Michigan, to be presented to Society of Automotive Engineers Government/Industry Meeting, Washington, D.C., May 15, 1991; 9 pages
	1K	THOMAS C. AUSTIN, <i>et al.</i> , "An Evaluation of "Remote Sensing" for the Measurement of Vehicle Emissions," prepared for The California Air Resources Board and The California I/M Review Committee, August 28, 1990, 30 pages; prepared by Sierra Research, Inc., California

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### OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

2A	ROBERT D. STEPHENS, <i>et al.</i> , "Remote Sensing Measurements of Carbon Monoxide Emissions from On-Road Vehicles," Copyright January 1991, Air & Waste Management Association, Volume 42, No. 1, pp. 39-46
2B	DONALD H. STEDMAN, <i>et al.</i> , "Remote Sensing of On-Road Vehicle Emissions," Final Report to Coordinating Research Council, The University of Denver, January 6, 1992, 21 pages
2C	PETER POPP, <i>et al.</i> , "Development of a High-Speed Ultraviolet Spectrophotometer Capable of Real-Time NO and Aromatic Hydrocarbon Detection in Vehicle Exhaust," Department of Chemistry, University of Denver, Colorado, Prepared for Proceedings of the 7 <sup>th</sup> CRC On-Road Vehicle Emissions Workshop, San Diego, California, April 9-11, 1997; 10 pages
2D	JOHN DIDOMENICO, <i>et al.</i> , "Preliminary Results from Cold Start Sensor Testing," Presented to 7 <sup>th</sup> CRC On-Road Vehicle Emissions Workshop, San Diego, California April 9-11, 1997; 1 page
2E	GARY A. BISHOP, <i>et al.</i> , "Enhancements of Remote Sensing for Vehicle Emissions in Tunnels," Air & Waste Management Association, Vol. 44, February 1994, pp. 169-175
2F	PAUL LEONARD GUENTHER, "Contributions to On-Road Remote Sensing of Automobile Exhaust," A Thesis Presented to the Faculty of Natural Sciences, Mathematics, and Engineering, University of Denver, June 1992, 95 pages
2G	DONALD H. STEDMAN, <i>et al.</i> , "On-Road Remote Sensing of CO and HC Emissions in California," Prepared for Research Division, California Air Resources Board, Sacramento, CA, submitted by University of Denver Chemistry Department, February 1994, 136 pages
2H	"Unstaffed On-Road Emissions Measurement Systems Services," Prepared by Parsons Engineering Science, Inc., Pasadena, California, September 1995
2I	"Proposal/Quote for Unstaffed On-Road Emissions Measurement Systems Services" in response to Phase IV - RFQ #94/95-003, prepared by Remote Sensing Technologies, Inc. delivered to Department of Consumer Affairs, Bureau of Automotive Repair, Sacramento, California, September 1, 1995
2J	STEVEN H. CADLE, <i>et al.</i> , "Measurement of Exhaust Particulate Matter Emissions from In-Use Light-Duty Motor Vehicles in the Denver, Colorado Area," Final Report, prepared for Coordinating Research Council, Atlanta, Georgia, 12/09/97, prepared by General Motors R&D Center, Michigan; 20 pages

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	3A	STEVEN H. CADLE, <i>et al.</i> , "Measurement of Exhaust Particulate Matter Emissions from In-Use Light-Duty Motor Vehicles in the Denver, Colorado Area," Final Report, prepared for Coordinating Research Council, Atlanta, Georgia, 3/24/98, "Appendix E. University of Denver Remote Sensing Observation of Smoking Vehicles," prepared by General Motors R&D Center, Michigan; 20 pages					
	3B	ROBERT D. STEPHENS, <i>et al.</i> , "Remote Sensing of Carbon Monoxide Emissions from On-Road Vehicles," Environmental Science Department, General Motors Research Laboratories, Michigan for presentation to Air and Waste Management Association, NC, May 1, 1990, 46 pages					
	3C	"Description and Documentation for Interim Vehicle Clean Screening Credit Utility," Draft Report, United States Environmental Protection Agency, May 1998, 40 pages					
	3D	DAVID S. E. PETHERICK, "Ontario's Indoor, Controlled-Mode Remote Sensing I/M Prescreen Concept," Ministry of Transportation of Ontario, Copyright 1996 Society of Automotive Engineers, Inc., 9 pages					
	3E	P. A. WALSH, <i>et al.</i> , "Texas 1996 Remote Sensing Feasibility Study," Final Report, prepared for Texas Natural Resource Conservation Commission, Austin, Texas, 8/29/97, prepared by Desert Research Institute, Energy and Environmental Engineering Center, Reno, Nevada, 9 pages					
	3F	"On Road Emissions Measurement System - Specifications," Bureau of Automotive Repair, August 30, 1999, Revision - J, 15 pages					
	3G	CRAIG S. RENDAHL, "Further Analysis of Wisconsin's Remote Vehicle Emissions Sensing Feasibility Studies," "Quality Control Efforts of Remote Vehicle Emissions Sensing," and "Data Handling and Validation from Wisconsin's Remote Vehicle Emissions Sensing Studies," Presented at the Air & Waste Management Annual Measurement of Toxics and Related Pollutants Conference, Research Triangle Park, North Carolina, 5/96, 34 pages.					
	3H	JAMES D. PETERSON, <i>et al.</i> , "Find and Fix the Polluters", Chemtech, January 1992, Copyright 1992 American Chemical Society, 7 pages.					
	3I	RSD 1000 Operator's Manual (Preliminary), Remote Sensing Technologies, IFB No. 94019, June 1993, 66 pages.					
	3J	RSD-1000 Remote Sensing Device Information Package to Mr. Wolf Klassen, Department of Natural Resources, Presented by Dennis L. Smith, February 24, 1993, 123 pages.					
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4A	ROBERT D. STEPHENS, <i>et al.</i> , "An Experimental Evaluation of Remote Sensing-Based Hydrocarbon Measurements: A Comparison to FID Measurements", <u>Journal of the Air &amp; Waste Management Association</u> , Volume 46, February 1996, pages 148-158.
4B	DONALD H. STEDMAN, "Automobile Carbon Monoxide Emission", <u>Environmental Science &amp; Technology</u> , Volume 23, No. 2, 1989, pages 147-149.
4C	MASAYUKI ADACHI, <i>et al.</i> , "Automotive Emission Analyses Using FTIR Spectrophotometer", Published by the Society of Automotive Engineers, SAE# 920723, pages 820-827.
4D	MICHAEL D. KOPLOW, <i>et al.</i> , "Characterization of On-Road Vehicle NO Emissions by Means of a TILDAS Remote Sensing Instrument", Published by the Coordinating Research Council, Published for the 7 <sup>th</sup> CRC On-Road Vehicle Emissions Workshop, March 11, 1997, pages 1-25.
4E	SCOTT E. MCLAREN, <i>et al.</i> , "Comparison of an Open Path UV and FTIR Spectrophotometer", Published by the Air & Waste Management Association, Published for Presentation at the 85 <sup>th</sup> Annual Meeting & Exhibition, Kansas City, Missouri, June 21-26, 1992, pages 1-10.
4F	"Developing an Inspection/Maintenance Program for Alternately-Fueled Vehicles", Third Interim Report Submitted to the California Bureau of Automotive Repair, Submitted by Radian Corporation, April 20, 1993, 147 pages.
4G	IAIN FREDERICK MCVEY, "Development of a Remote Sensor for Mobile Source Nitric Oxide", A Thesis Presented to the Faculty of Natural Sciences, Mathematics, and Engineering, University of Denver, November 1992, 111 pages.
4H	S. P. BEATON, <i>et al.</i> , "Emission Characteristics of Mexico City Vehicles", <u>Journal of the Air &amp; Waste Management Association</u> , Volume 42, No. 11, November 1992, pages 1424-1429.
4I	DOUGLAS R. LAWSON, <i>et al.</i> , "Emissions from In-Use Motor Vehicles in Los Angeles: A Pilot Study of Remote Sensing and the Inspection and Maintenance Program", <u>Journal of the Air &amp; Waste Management Association</u> , Volume 40, No. 8, August 1990, pages 1096-1105.
4J	YI ZHANG, <i>et al.</i> , "Enhancement of Remote Sensing for Mobile Source Nitric Oxide", <u>Journal of the Air &amp; Waste Management Association</u> , Volume 46, January 1996, pages 25-29.
4K	DONALD H. STEDMAN, <i>et al.</i> , "Evaluation of a Remote Sensor for Mobile Source CO Emissions", U.S. Environmental Protection Agency, CR-815778-01-0, Report No. EPA/600/4-90/032, January 1991, 90 pages.

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	5A	JAMES BUTLER, <i>et al.</i> , "Factors Affecting the NDIR Measurement of Exhaust Hydrocarbons", Published by the Coordinating Research Council, Published for the CRC 5 <sup>th</sup> On-Road Vehicle Emissions Workshop, 1995, 16 pages.					
	5B	SCOTT E. MCLAREN, <i>et al.</i> , "Flux Measurements Using Simultaneous Long Path Ultraviolet and Infrared Spectroscopy", Published by the Air & Waste Management Association, Published for Presentation at the 83 <sup>rd</sup> Annual Meeting & Exhibition, Pittsburgh, Pennsylvania, June 24-29, 1990, 7 pages.					
	5C	GARY A. BISHOP, <i>et al.</i> , "Infrared Emission and Remote Sensing", <u>Journal of the Air &amp; Waste Management Association</u> , Volume 42, No. 5, May 1992, pages 695-697.					
	5D	HAKAN AXELSSON, <i>et al.</i> , "Measurement of Aromatic Hydrocarbons with the DOAS Technique", <u>Applied Spectroscopy</u> , Volume 49, No. 9, 1995, pages 1254-1260.					
	5E	GARY A. BISHOP, <i>et al.</i> , "Method Comparisons of Vehicle Emissions Measurements in the Fort McHenry and Tuscarora Mountain Tunnels", <u>Atmospheric Environment</u> , Volume 30, No. 12, 1996, pages 2307-2316.					
	5F	DONALD H. STEDMAN, <i>et al.</i> , "NO <sub>x</sub> Data by Remote Sensing", Published by the Coordinating Research Council, Published for the 5 <sup>th</sup> CRC On-Road Vehicle Emissions Workshop, April 3-5, 1995, 16 pages.					
	5G	DONALD H. STEDMAN, <i>et al.</i> , "On-Road Carbon Monoxide and Hydrocarbon Remote Sensing in the Chicago Area", Final Report Prepared by University of Denver Chemistry Department, Prepared for Illinois Department of Energy and Natural Resources, Office of Research and Planning, Illinois Contract AQ 40, Project 91/122, Report No. ILENR/RE-AQ-91/14, October 1991, pages 1-70.					
	5H	GARY A. BISHOP, <i>et al.</i> , "On-Road Carbon Monoxide Emission Measurement Comparisons for the 1988-1989 Colorado Oxy-Fuels Program", <u>Environmental Science &amp; Technology</u> , Volume 24, No. 6, 1990, pages 843-847.					
	5I	DONALD H. STEDMAN, <i>et al.</i> , "On-Road CO Remote Sensing in the Los Angeles Basin", Final Report Prepared for the Research Division, California Air Resources Board, Submitted by University of Denver Chemistry Department, August 1991, Contract No. A932-189, 70 pages.					
	5J	SCOTT MCLAREN, "Open Path Spectrometers for Atmospheric Monitoring", A Dissertation Presented to the Faculty of Natural Sciences, Mathematics and Engineering, November 1995, 170 pages.					

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	6A	CAROL E. LYONS, <i>et al.</i> , "Remote Sensing Enhanced Motor Vehicle Emissions Control for Pollution Reduction in the Chicago Metropolitan Area: Siting and Issue Analysis", Final Report Prepared by University of Denver Atmospheric Science Center, Prepared for Illinois Department of Energy and Natural Resources, Office of Research and Planning, Illinois Contract AQ 30, Project 90/009, Report No. ILENR/RE-AQ-91/15, October 1991, pages 1-65.					
	6B	PETER JOHN POPP, "Remote Sensing of Nitric Oxide Emissions from Planes, Trains and Automobiles", A Dissertation Presented to the Faculty of Natural Sciences, Mathematics and Engineering, August 1999, 170 pages.					
	6C	BRETT C. SINGER, <i>et al.</i> , "Scaling of Infrared Remote Sensor Hydrocarbon Measurements for Motor Vehicle Emission Inventory Calculations", <u>Environmental Science &amp; Technology</u> , Volume 32, No. 21, 1998, pages 3241-3248.					
	6D	LUCIAN W. CHANEY, "The Remote Measurement of Traffic Generated Carbon Monoxide", <u>Journal of the Air Pollution Control Association</u> , Volume 33, No. 3, March 1983, pages 220-222.					
	6E	JOSE LUIS JIMENEZ-PALACIOS, "Understanding and Quantifying Motor Vehicle Emissions with Vehicle Specific Power and TILDAS Remote Sensing", A Dissertation Presented to the Department of Mechanical Engineering, February 1999, 360 pages.					
	6F	"Vehicle Inspection Instrumentation", Published by the Lockheed Missiles and Space co., Inc., Report No. ARB-R-643-73-26, June 30, 1973, 99 pages.					
	6G	JOHN E. SIGSBY, JR., <i>et al.</i> , "Volatile Organic Compound Emissions from 46 In-Use Passenger Cars", <u>Environmental Science &amp; Technology</u> , Volume 21, No. 5, 1987, pages 466-475.					
	6H	YI ZHANG, <i>et al.</i> , "Worldwide On-Road Vehicle Exhaust Emissions Study by Remote Sensing", <u>Environmental Science &amp; Technology</u> , Volume 29, No. 9, 1995, pages 2286-2294.					

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